

REMARKS

In the Office Action, the Examiner rejected Claims 1-28 and 30-45 under 35 U.S.C. 103 as being unpatentable over the prior art. In particular, Claims 1-5, 12, 14-16, 18, 23, 24, 30 and 33 were rejected as being unpatentable over U.S. Patent 6,233,565 (Lewis, et al.) in view of U.S. Patents 5,850,442 (Muftic, et al.) and 5,604,805 (Brands). Claims 6-11, 13, 17, 19-22, 25-28, 31, 32, 34 and 35 were rejected as being unpatentable over Lewis, et al. in view of Brands.

Applicants herein ask that independent Claims 1, 6, 13, 24, 25 and 26 be amended to better define the subject matters of these claims.

For the reasons set forth below, Claims 1-28 and 30-35 patentably distinguish over the prior art and are allowable. The Examiner is, thus, respectfully asked to enter this Amendment, to reconsider and to withdraw the rejections of Claims 1-28 and 30-35, and to allow these claims.

As explained in detail in the present application, this invention relates to methods and systems to issue and to verify ownership of pseudonymous or anonymous electronic receipts. In a first aspect of the invention, a first pair of public/private keys are used to conduct a transaction between a user and a transaction server and to generate a receipt for the transaction. This receipt is sent to a holder, which might be, but is not necessarily, the owner. In a second aspect of the invention, the receipt is sent to a verification server, and a second pair of public/private keys is used to verify ownership of the receipt. All this is done while maintaining the owner pseudonymous or anonymous.

Independent Claims 1, 6, 13, 24, 25 and 26 are being amended to emphasize the feature that the receipt used in this invention is issued and used in a manner that can be used to verify ownership of the receipt while also maintaining the owner anonymous or pseudonymous. Moreover, claims 1-28 and 29-35 patentably distinguish over the prior art because that prior art does not disclose or suggest this feature of the invention.

For instance, Lewis, et al. discloses methods and systems for issuing receipts over the Internet. With the procedures described in Lewis, et al, a user purchases goods or services over the Internet from a server having a receipt generation module. Special transaction software is provided to manage the printing of various communications. The process described in Lewis, et al. is comparatively standard in many respects, except that it is over the Internet. Further, and importantly, no particular effort is made to keep the owner anonymous or pseudonymous.

Brands, specifically, column 2, lines 15-37 of Brands, was cited by the Examiner for its disclosure of the use of pseudonyms to withhold the identity of a user in a transaction. More specifically, this reference describes, in column 2, lines 15-34, a procedure to transfer information between users that are known by different pseudonyms; and, generally, this is done by keeping the pseudonyms unlinkable. In this procedure cryptographic protocols are employed that enable a user to transform an ordinary digital signature on one pseudonym to a digital signature on other pseudonyms. In this way, information certified by an organization can be shown to other organizations at which the user has a pseudonym, without enabling the organization to link the transferred information.

Muftic, et al, columns 2-4, was cited in the Office Action, for its disclosure of a method and system for performing secure electronic commerce. In this method and system,

procedures are used to authenticate signed messages. Importantly, Muftic, et al. is directed more to authentication than to confidentiality.

In addition, as the Examiner has recognized, neither Muftic, et al. nor Brands teaches how to issue and to verify ownership of a receipt while maintaining the owner anonymous or pseudonymous. The Examiner argues, however, that the combination of Lewis, et al, Muftic, et al. and Brands does this.

Applicants respectfully submit that, in coming to this conclusion, the Examiner is exercising hindsight reconstruction to piece together bits and pieces of the prior art to produce the present invention. This is because there is no suggestion in the references for combining them the way that the Examiner has. Specifically, as mentioned above, Lewis, et al. is not concerned with maintaining anonymity, while Brands does not suggest how to issue or use receipts while maintaining the owner of the receipt anonymous or pseudonymous. The only blueprint for doing that is found in the present application itself; and, it is respectfully submitted, the Examiner cannot use that blueprint as a guide to reconstruct the prior art.

Moreover, even if the references are combined as the Examiner has, that combination still fails to teach or suggest how to provide receipts that, on the one hand, can be effectively used to authenticate ownership while, on the other hand, also maintain the owner of the receipt anonymous or pseudonymous. The present invention effectively accomplishes these somewhat conflicting objectives.

Applicants herein ask that Independent Claims 1, 6, 13, 24, 25 and 26 be amended to emphasize this aspect of the invention. Specifically, Claims 1 and 24 are being amended to describe the limitation that the private signature key, which is used to generate the receipt, is examined to determine if it is associated with a specified public signature scheme thereby to

verify ownership of the receipt by the receipt owner while maintaining the owner anonymous or pseudonymous.

Claims 6 and 25, which are directed, respectively, to a receipt generation method and receipt generating device, describe the feature that the receipt is issued, including a reference to a designated owner and details for what the receipt has been given, to provide that designated owner with the receipt and thereby to enable the owner to verify ownership of said receipt while maintaining that owner anonymous or pseudonymous.

Claims 13 and 26 are directed to a method and apparatus, respectively, for providing ownership of a receipt, and these claims describe the feature that the receipt includes information as for what the receipt has been issued and a reference to the designated owner of the receipt and thereby to enable the owner to verify ownership of said receipt while maintaining that owner anonymous or pseudonymous.

The other references of record have been reviewed, and these other references, whether considered individually or in combination, also do not disclose or suggest the above-discussed aspect of the invention.

Because of the above-discussed differences between Claims 1, 6, 13, 24, 25 and 26, and because of the advantages associated with those differences, these claims patentably distinguish over the prior art and are allowable. Claims 2-5, 23 and 30 are dependent from Claim 1 and are allowable therewith; and Claims 7-12, 27 and 31 are dependent from, and are allowable with Claim 6. Similarly, Claims 14-22, 28 and 32 are dependent from, and are allowable with, Claim 13. Claims 33, 34 and 35 are dependent from, and are allowable with, Claims 24, 25 and 26 respectively.

The changes requested herein to Claims 1, 6, 13, 24, 25 and 26 only elaborate on features already described in the claims. In particular, each of these claims presently describe the receipt, the owner, and the features that enable the receipt to be used to verify ownership while maintaining the owner anonymous or pseudonymous, and the changes asked for herein only state expressly that this result is expressly achieved by the claimed subject matter. It is thus believed that entry of this Amendment is appropriate, and such entry is respectfully requested.

In light of the above discussion, the Examiner is requested to enter this Amendment, to reconsider and to withdraw the rejections of Claims 1-28 and 30-35 under 35 U.S.C. 103, and to allow these claims. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,

John S. Sensny
John S. Sensny
Registration No. 28,757
Attorney for Applicant

Scully, Scott, Murphy & Presser
400 Garden City Plaza - Suite 300
Garden City, New York 11530
(516) 742-4343

JSS:jy

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